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ABSTRACT

A study was undertaken at California's College of the Canyons (CC) to determine whether evidence existed of disproportionate impact in English reading course placement based on student ethnicity, gender, or age. Data were compiled for all 4,312 students tested between spring 1993 and fall 1995, while the standard for disproportionate impact was taken from Equal Employment Opportunity Commission guidelines that the selection rate of any given subgroup should not be less than 80% of that of the majority group. At CC, students who score 16 out of 40 or higher on the English reading placement test are recommended to take associate degree-applicable English courses. Among the study sample, 79.3% (n=2,774) were recommended to take degree-applicable English reading courses. An analysis of the placements indicated some disproportionate impact by ethnic group, with the credit placement rate for Asian students only 77% and that for Black students only 61.4% of the rate for White students. No evidence of disproportionate impact was found, however, for either gender or age, with the rate for females 92.8% that of males. Based on findings it was recommended that follow-up investigations be conducted to determine reasons for the disproportionate impact and that efforts be made to ensure that all students take appropriate tests. (AJL)

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ED 401 980

English Reading Placement Recommendations at College of the Canyons: An Analysis of Disproportionate Impact

College of the Canyons
August 1996

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JC 970 016

Abstract

Analyses of the rates at which placement recommendations for college level and basic skills English reading courses are made, based upon the College Board's APS reading test, were conducted. Specific comparisons were made for the student background characteristics of ethnicity, gender, and age. Disproportionate impact was found in the cases of Asian students and black students. Follow-up investigations into the reason for the apparent disproportionate impact for these two groups are necessary if this test is going to continue to be used.

English Reading Course Placement Recommendations: An Analysis of Disproportionate Impact

The issue of disproportionate impact as it relates to the assessment and placement of college students involves the extent to which placement rates into college level courses vary across subgroups of students. Differences in placement rates may be due to the interactive effects of a number of factors and would serve as a signal that a closer look at the test in question and its relationship with student background characteristics is needed. The study reported here was undertaken to determine whether there is evidence for disproportionate impact in English reading course placement at College of the Canyons. For those cases where disproportionate impact is found, further investigation should be undertaken to determine the reason for the disproportionate impact.

While the discussion of what constitutes "differential placement rates" continues, one standard has emerged. The standard comes from EEOC (Equal Employment Opportunity Commission) guidelines concerning disproportionate impact in employee selection. It holds that disproportionate impact is evidenced when the selection rate of an impacted group is less than 80% of the majority group. The guidelines make it clear that the 80% value should be used with some care and interpreted within the full context of the local setting. As an example, they note that "smaller differences in selection rate may constitute adverse impact where they are significant in both statistical and practical terms" and also that "greater differences in selection rate may not constitute adverse impact where the differences are based on small numbers and are not statistically significant" (Uniform Guidelines on Employee Selection Procedures, 1978). This "80%" level has been offered as a reasonable criterion for disproportionate impact studies of placement tests used in the California Community Colleges, with the primary difference being that placement rates into courses are targeted, rather than selection for employment.

English Reading Course Placement Recommendations

The English reading portion of the College Board Assessment and Placement Services (APS) test is administered to incoming COC students whose primary language is English, for the purpose of making an initial English reading course placement recommendation. Data were compiled for all students who were tested between Spring 1993 and Fall 1995 totaling 4312 students for the reading test.

According to the placement rule (see Table 1 below), students who score 16 or higher (out of 40 Possible) are recommended to take an associate degree applicable course (English 80 or higher), while various ranges of lower scores are associated with recommendations for English 34 or lower. (The descriptors "degree applicable" and "associate degree applicable" are used interchangeably in this report, as are "non-degree applicable" , and "non-associate degree applicable".) Overall rates of placement into these courses can be readily determined, as can such rates for various subgroups. For purposes of assessing possible disproportionate impact, the critical categories are recommended placement into non-degree applicable courses (English 34 or below) versus degree-applicable courses (English 80 and above).

Table 1
Placement Rule for the APS English-Reading Test

Score Range	Placement Recommendation
0-9	English 10
10-15	English 34
16-24	English 80
25-35	English 101

Student Ethnicity

Table 2 presents the number and percent of students in each of the ethnic categories who were recommended to degree-applicable and non-degree applicable English reading courses. A total of 79.3% of the entire sample was recommended to college level English courses (English 34 or above).

Table 2

Placement Into Basic Skills and College Level English Reading Courses, by Ethnic Category

	White	Hispanic	Asian	Black	Native American	Other
Non-Degree	425 (15.3%)	265 (30.4%)	55 (34.8%)	60 (48%)	19 (30.2%)	42 (23%)
Degree	2349 (84.7%)	607 (69.6%)	103 (65.2%)	65 (52%)	44 (69.8%)	141 (77%)
Total	2774	872	158	125	63	183
EEOC ratio	baseline	91%	77%	61.4%	82.5%	91%

As noted earlier, EEOC guidelines indicate that all relevant subgroups should be selected (in this case, recommended for enrollment into English 80 or above) at a rate that is at least 80% or the rate of the majority group. For this analysis, the "majority group is typically the group with the highest selection/placement rate. The critical value based on the EEOC 80% rate standard in this case is 67.8% (80% of the 84.7% rate for Whites). Therefore the placements rates for the subgroups Hispanic, Native American, and "other" meet the standard, but

Asian and blacks do not. Thus there is evidence that a disproportionate impact exist in placement recommendations based on ethnicity for these two subgroups.

Student Gender

Table 3 presents the number and percent of females and males receiving various English reading course placement recommendations. The sample consists of 52.9% females and 47.1% males. About Ninety percent of both males and females were recommended to degree applicable courses. Applying the EEOC standard, the critical percentage is 65.8% (80% of the male rate of 82.3%). Since the placement rate for females exceeds this value, there is no evidence for disproportionate impact involving the sex of the student being tested.

Table 3

Placement Into Basic Skills and College Level English Reading Courses, by Gender

	Female	Male
Non Degree	538 (23.6%)	359 (17.7%)
Degree	1744 (76.4%)	1669 (82.3%)
Total	2282	2028
EEOC ratio	92.8%	baseline

Student Age

Table 4 presents the placement recommendation rates into degree applicable and non-degree applicable English courses for the following age categories; 19 and below, 20-24, 25-29, 30-39, and over 40. While these categories do not correspond perfectly with the statewide MIS categories, they nevertheless divide the age continuum into meaningful subgroups. Further, the consistency in placement rates across these groups is striking. The EEOC guideline of 80% results in a critical value of 65.2% (80% of the rate of 81.5% for the age group 19 or less). All age categories are well above this critical value, therefore it appears that there is no disproportionate impact in placement recommendations due to the age of the student.

Table 3

Placement Into Basic Skills and College Level English Reading Courses, by Age Category

	Student's Age				
	0-19	20-24	25-29	30-39	over 40
Non Degree	572 (18.5%)	147 (16.9%)	69 (16.6%)	71 (14.7%)	28 (17.5%)
Degree	2522 (81.5%)	400 (87.9%)	190 (73.4%)	217 (75.3%)	74 (72.5%)
Total	3094	547	259	288	102
	baseline	89.7%	90%	92.4%	89%

Summary and Discussion

Table 5 summarizes the analyses reported above. In the case of student ethnicity, there is some evidence of disproportionate impact in the use of the APS for placement recommendations of Asian and Black students. There is no evidence of disproportionate impact concerning gender or age.

Table 5
Summary of Disproportionate Impact Analyses for the APS

Characteristic/ Category	Outcome
Ethnicity	
Asian	Evidence for Disproportionate Impact
White	Baseline group
Hispanics	No evidence for Disproportionate Impact
Native American	No evidence for Disproportionate Impact
Black	Evidence for Disproportionate Impact
Gender	
Male	Baseline group
Female	No evidence for Disproportionate Impact
Age	
19 or less	Baseline group
20-24	No evidence for Disproportionate Impact
25-29	No evidence for Disproportionate Impact
30-40	No evidence for Disproportionate Impact
40 or more	No evidence for Disproportionate Impact

The issue now becomes one of interpreting the evidence that suggests disproportionate impact exists for Asian and black

students. A large number of variables may interact to moderate the relationship between student ethnicity and performance on the APS (as well as performance in class). Stated differently, student background characteristics, per se, are not causes of the differential performance that results in the different rates of placement documented in this report. Rather, more immediate determinants of performance may vary systematically with ethnicity resulting in the observed relationships between ethnicity and the full array of outcome indices. These moderating factors may include previous courses taken, performance in those courses and time since previous course taken, educational goal, experience with the English language, experience with tests, many other variables relating to educational preparation, and an assortment of affective and motivational variables.

A few caveats warrant reemphasizing. First, the EEOC criterion is just a guideline. It would be a mistake to assume that all groups not identified as impacted in this study are truly free from such impact. Second, all information on student background characteristics is obtained via self-reports. While this method tends to be quite reliable, it is possible that in some cases students may have provided incorrect information, either intentional, or due to carelessness.

Recommendations

1. Follow-up investigations are necessary to explain why disproportionate impact was found in the case of Asian and black students.

2. It is also possible that a number of the Asian students who took the APS (for native English speakers) should probably have taken the ESL placement tests (for non-native English speakers). Efforts to help all students to take appropriate tests should be strengthened.

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